

cagctacatg ccattaatct ggaaggaacg ggcaggaaag ccaccatgca aacaaccag
 agctcctgcc ccggcagccc cccagatact gaggatggct gggagcccat cctatgcagg
 ggagagatca acttcggagg gtctgggaag aagcgaggca agtttggtgaa ggtgccaagc
 agtgtggccc cctctgtgct ttttgaactc ctgctcaccg agtggcacct gccagccccc
 aacctggtgg tgtccctggg ggggtgaggaa cgacctttgg ctatgaagtc gtggcttcgg
 gatgtcctgc gcaaggggct ggtgaaagca gctcagagca caggtgcctg gatcctgacc
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 gctagcacat ccaccaagat ccgtgtagt ggcacggaa tggcctctct ggatcgaatc
 cttcacctgc aacttctaga tgggtgtccac caaaaggagg atactcccat ccactacca
 gcagatgagg gcaacattca gggacccctc tgccccctgg acagcaatct ctcccacttc
 atccttgtgg agtcaggcgc ccttgggagt gggaaacgacg ggctgacaga gctgcagctg
 agcctggaga agcacatctc tcagcagagg acaggttatg ggggcaccag ctgcatccag
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 gcagtggagc aggtgcccc atggctgatc ctggcaggtt ctggtggcat tgctgatgta
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 gatgaggctc gtgtgaactg ttctcttcac cctctgctgc tggaaagctc ggcttctgc
 cctaattctc atgccaactg gctggtcatt ctctgctgg ttaccttctt gcttgtcact

FIG. 1A

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aatgtgctgc	tcatgaacct	tctgatcgcc	atgttcagct	acacattcca	ggtggtgcaa
ggcaatgcag	acatgttctg	gaagtttcaa	cgctaccacc	tcatcggtga	ataccatgga
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cctaagagaa	tgaaactcat	gtctttggca	tctattcggg	agcctcagaa	gtatcctctc
cagcagggca	agatttttca	tgtcccacta	aagctttcac	tggttggac	tggaacagctg
gatctggcca	agtcctacat	aggacaccat	ctgcctggat	ggggctattt	aggtctaacc
cctgtcttac	cctgagttcc	taagaagcca	acctcttaaa	cactagggtt	ctttctgacc
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cctcccatct	ttcaccccc	acagcattat	ctgtctgatc	attctggcag	aaaccccaag
atattgctca	agggtagcca	atgctacttt	actttctata	aagcctgtag	accacctcaa
aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa
aaaaaaaaaa	aaaaaaa				

FIG.1B

FIG. 1B

MQTTQSSCPGPPDTEGWEPILCRGEINFGGSGKKRGKFKVPSSVAPSVLFELLTEWHLPAPNLVVSLVGEERPLAMKSWLRDVLK
 KGLVKAAQSTGAWILTSALHVGGLARHVGQAVRDHSLASTSTKIRVVAIGMASLDRILHRQLLDGVHQKEDTPIHYPADEGNIQGPLCPL
 DSNLSHFILVESGALGSGNDGLTELQSLSEKHISQRTGYGGTSCIQIPVLCLLVNGDPNTLERISRAVEQAAPWILAGSGGIADVLA
 ALVSQPHLLVPQVAEKQFREKFPSECFSEWIAVHWTELLQNIAAHPHLLTVYDFEQEGSEDLDTVILKALVKACKSHSQEAQDYLDLKL
 LAVAWDRVDIAKSEIFNGDVVEWKSCDLEEVMTDALVSNKPDFVRLFVDSGADMAEFLTYGRLLQLYHSVSPKSLFELLQRKHEEGRLT
 LAGLGAQQARELP IGLPAFSLHVSRLKDFLHDACRGFYQDGRMEERGPPKRPAGQKWL PDL SRKSEDPWRDLFLWAVLQNR YEMATY
 FWAMGREGVAAALAAACKIIKEMSHLEKEAEVARTMREAKYEQALDLFSECYGNSEDRAFALLVRRNHSWRTTCLHLATEADAKAFFA
 HDGVQAFLLTKIWWGDMATGTPILRLLGAFTCPALIYTNLISFSEDAPQRMDELDQEPDSDMEKSFLCSRGGLQLEKLEAPRAPGDLG
 PQAAFLLLTRWRKFWGAPVTVFLGNVVMYFAFLFLFTYVLLVDFRPPQPGPSGSEVTL YFWVFTLVLEEIRQGFFTDETHLVKKFTLYV
 EDNWNKCDMVAIFLFI VGTCTRMVPSVFEAGRTVLAIDFMVFTLR LIHIFAIHKQLGPKIIIVERMMKDVFFFLLFVSVWLVA YGVTTQ
 ALLHPHDGRLEWIFRRVLYRPLYQIFGQIPLDEIDEARVNCSLHPLLESSASCPNL YANWLVI LLVTFLLVTNVLLMNLIIAMFSYT
 FQVVQGNADMFWKFQRYHLIVEYHGRPALAPPFILLSHLSLVLKQVFRKEAQHKRQHLE RDL PDL DQKIITWETVQKENFLSTMEKRR
 RDSEGEVLRKTAHRVDLIAKYIGGLREQEKRIKCLCSQANYCM LLLSSMTDTLAPGGTYSQQNCGCRSQPASARDREYLESGLPSPSDT

FIG.2

atgcaggatg tccaaggccc ccgtcccgga agccccgggg atgctgaaga ccggcgggag
 ctgggcttgc acaggggcca ggtcaacttt ggagggtctg ggaagaagcg aggcaagttt
 gtacgggtgc cgagcggagt ggccccgtct gtgctctttg acctgctgct tgctgagtgg
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 aagtcctggc tgcgggatgt gctgcgcaag gggctggtga aggcggctca gagcacagga
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 accttctgt tggtcacaa tgtgctgctc atgaacctgc tcatcgccat gttcagctac
 acgttccagg tggtagagg caacgcagac atgttctgga agttccagcg ctacaacctg

FIG.3A

[illegible]

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mTrp8	MQTTQSSCPGSPDTEGWEPILCRGEINFGGSGKKRGKFVKVPSSVAPSVLFELLTEW	60
hTRP8	MQDVQGPRPGSPGDAEDRRELGLHRGEVNFGGSGKKRGKFVRVPSPGVAPSVLFDLLLAEW	60
	** . * . . ***** * . ** * * *** . ***** . *** . ***** . *** . **	
mTrp8	HLPAPNLVSVLVGEERPLAMKSWLRDVLRLKGLVKAAQSTGAWILTSALHVGLARHVGQAV	120
hTRP8	HLPAPNLVSVLVGEEQPFAMKSWLRDVLRLKGLVKAAQSTGAWILTSALRVGLARHVGQAV	120
	***** . * . ***** . ***** . ***** . ***** . *****	
mTrp8	RDHSLASTSTKIRVVAIGMASLDRILHRQLLDGVHQKEDTPIHYPADENIQGPLCPLDS	180
hTRP8	RDHSLASTSTKVRVAVGMASLGRVLHRRILEEAQ - - EDFPVHYPEDDGGSQGPLCSLDS	178
	***** . ***** . ***** . * . *** : . * : . : ** * . *** * . * . ***** . ***	
mTrp8	NLSHFILVESGALGSGNDGLTELQLSLEKHISQQRRTGYGGTSCIQIPVLCLLVNGDPNTL	240
hTRP8	NLSHFILVEPGPPGKG - DGLTELRLRLEKHISEQRAGYGGTGSIEIPVLCLLVNGDPNTL	237
	***** . * . * . ***** . * ***** . ** . ***** . . * . ***** . *****	
mTrp8	ERISRAVEQAAPWLILAGSGGIADVLAALVSQPHLLVPQVAEKQFREKFPSECFSWEAIV	300
hTRP8	ERISRAVEQAAPWLILVGSGGIADVLAALVNQPHLLVPKVAEKQFKEKFPKHFSEWEDIV	297
	***** . ***** . ***** . ***** . ***** . ***** . *****	
mTrp8	HWTELLQNIAAHPHLLTVYDFEQEGSELDLTVILKALVKACKSHSQEAQDYLDLKLAVA	360
hTRP8	RWTKLLQNITSHQHLLTVYDFEQEGSELDLTVILKALVKACKSHSQEPQDYLDLKLAVA	357
	: ** . ***** : . * ***** . ***** . ***** . ***** . *****	
mTrp8	WDRVDIAKSEIFNGDVEWKSCDLEEVMTDALVSNKPDFVRLFVDSGADMAEFLTYGRLQQ	420
hTRP8	WDRVDIAKSEIFNGDVEWKSCDLEEVMDALVSNKPEFVRLFVDNGADVADFLTYGRLQE	417
	***** . ***** . ***** . ***** . *** . * . ***** .	
mTrp8	LYHSVSPKSLLFELLQRKHEEGRLTLAGLGAQQARELPIGLPAFSLHEVSRVLKDFLHDA	480
hTRP8	LYRSVSRKSLLFDLLQRKQEEARLTLAGLGTQQAREPPAGPPAFSLHEVSRVLKDFLQDA	477
	** . *** ***** . ***** . ** . ***** . ***** * * ***** . **	
mTrp8	CRGFYQDGR - - - RMEERGPPKRPAGQKWLPDLRSKSEDPWRDLFLWAVLQNRHYEMATYF	536
hTRP8	CRGFYQDGRPGDRRAEKGPAKRPTGQKWLLDLNQSENPNWRDLFLWAVLQNRHEMATYF	537
	***** * * . ** . *** . ***** ** . : *** . ***** . *****	
mTrp8	WAMGREGVAAALAACKIIKEMSHLEKEAEVARTMREAKYEQALALDLFSECYGNSEDRAFA	596
hTRP8	WAMGQEGVAAALAACKILKEMSHLETEAEARATREAKYERLALDLFSECYSNSEARAF	597
	**** . ***** . ***** . *** . ** : ***** . ***** . *** *****	

FIG.5

Classification and Secondary Structure Prediction of Membrane Proteins

<http://azusa.proteome.bio.tuat.ac.jp/sosui/>

Orientation of the N-terminus of	mTrp8:	IN		
Number of transmembrane helices of	mTrp8:	6		
Position of transmembrane helices of	mTrp8:	helix	begin	end
		1	732	754
		2	769	792
		3	807	829
		4	839	863
		5	870	893
		6	955	977

Orientation of the N-terminus of	hTrp8:	IN		
Number of transmembrane helices of	hTrp8:	6		
Position of transmembrane helices of	hTrp8:	helix	begin	end
		1	733	755
		2	770	792
		3	807	829
		4	843	863
		5	873	893
		6	955	977

FIG.6A

HYDROPHOBICITY PROFILE OF mTrp8 (MADE WITH DNAMAN SOFTWARE)

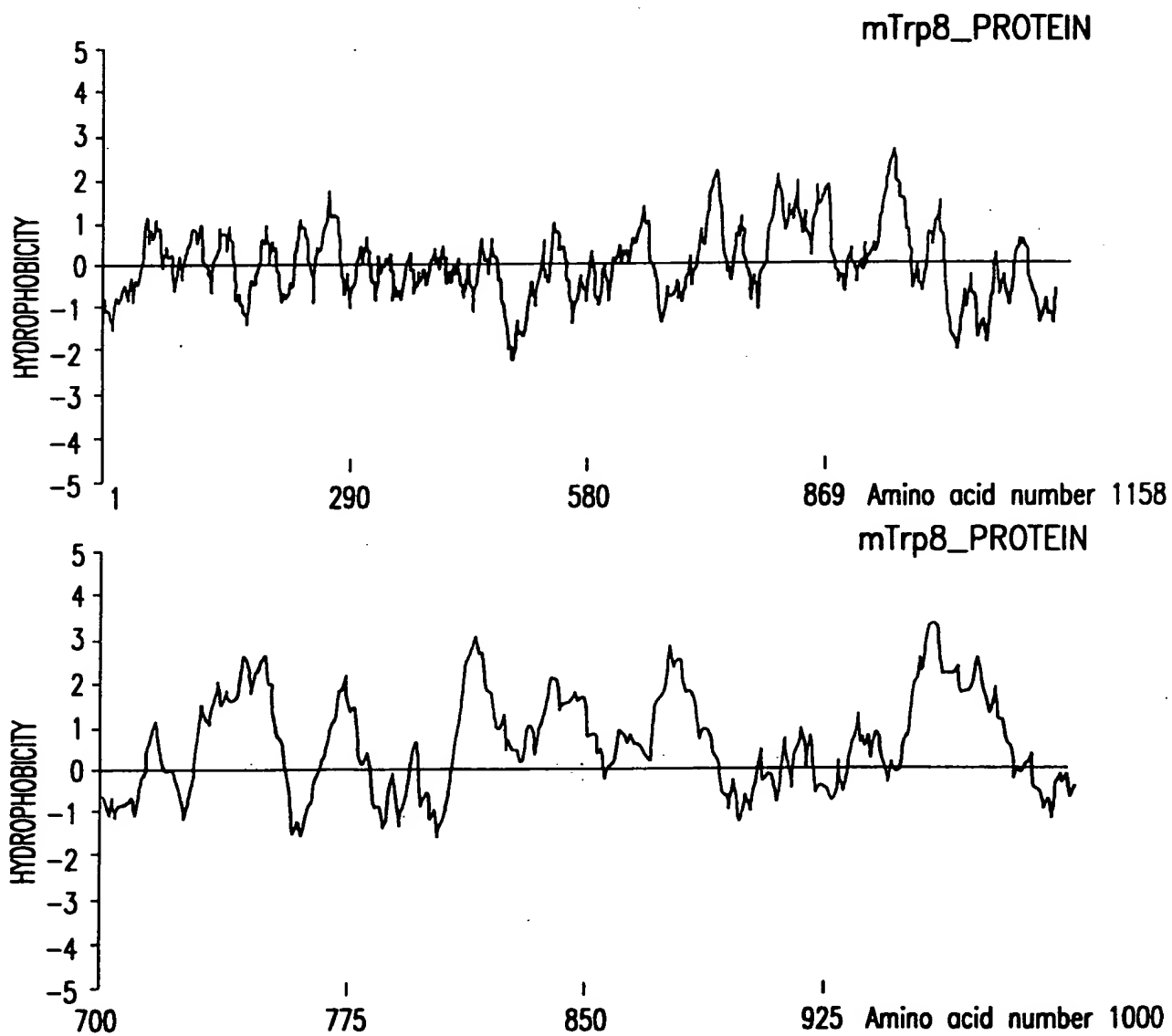


FIG. 6B

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HYDROPHOBICITY PROFILE OF hTrp8 (MADE WITH DNAMAN SOFTWARE)

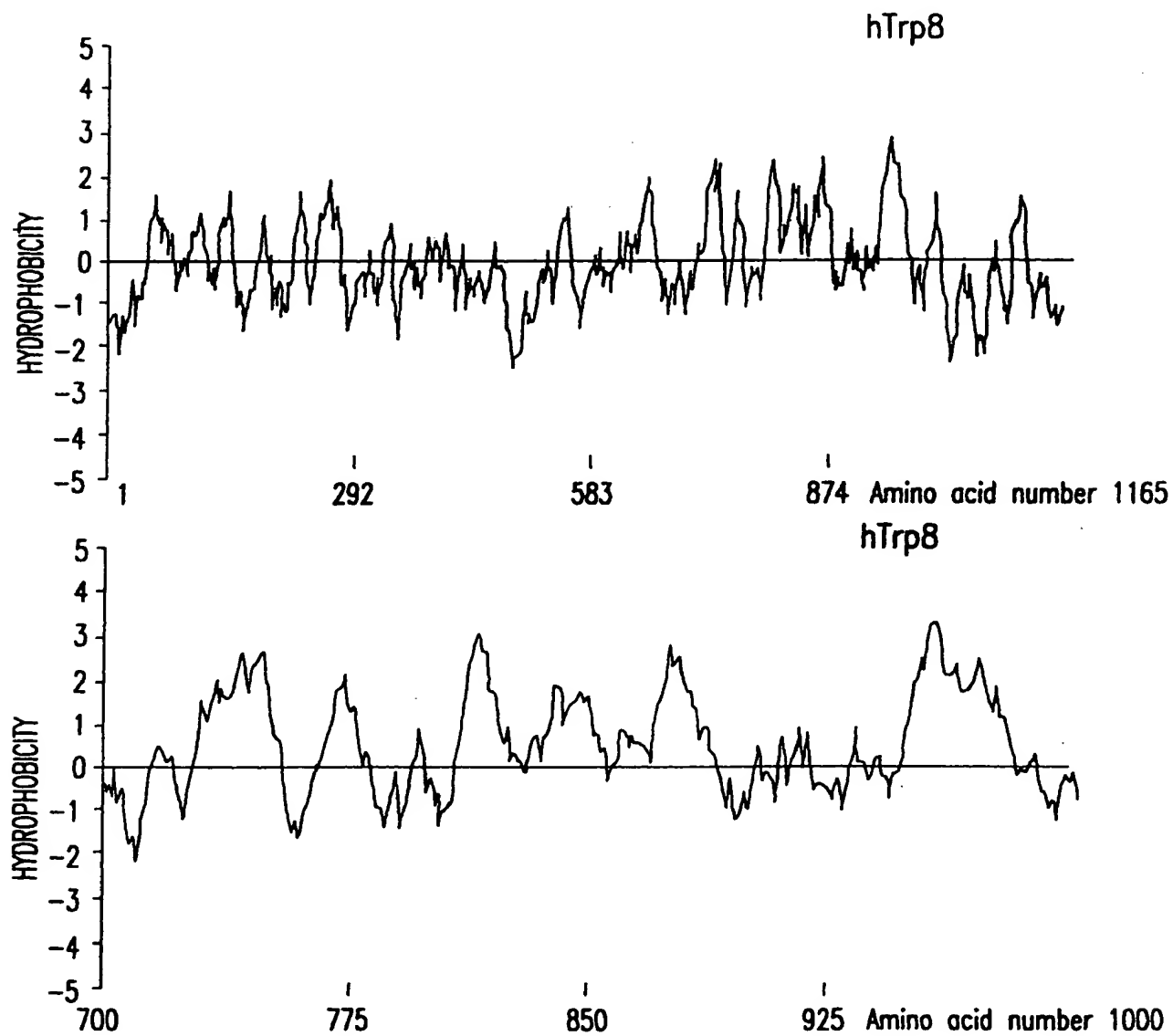


FIG. 6C

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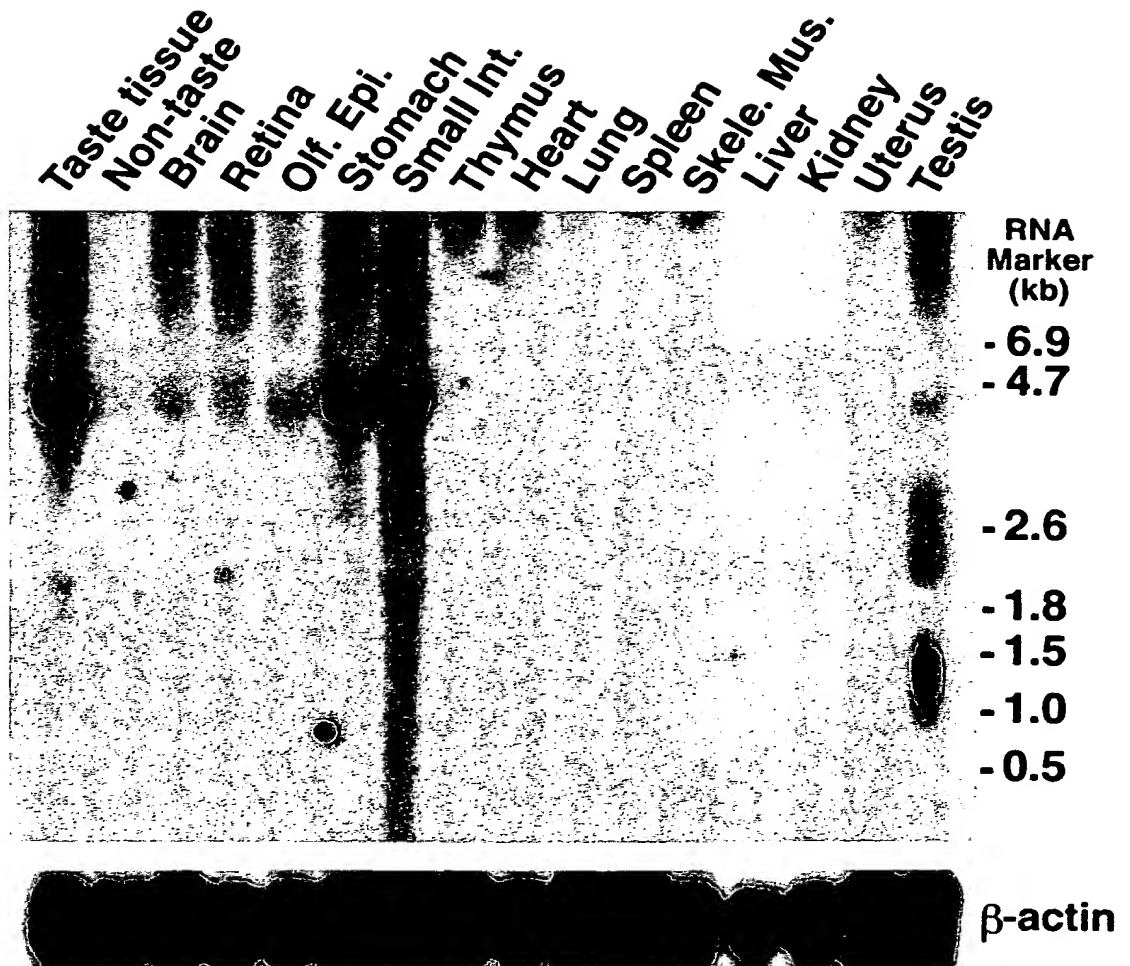


FIG. 7

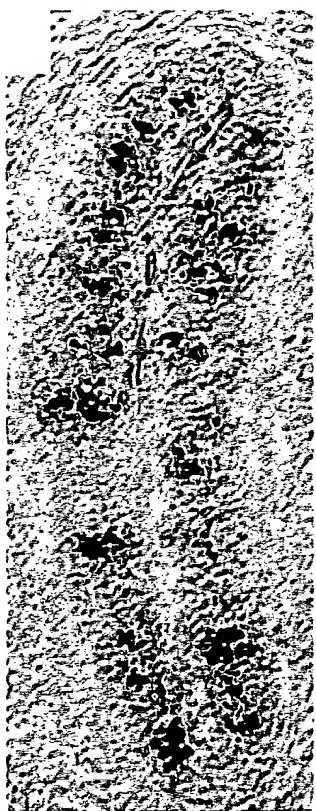


FIG.8A

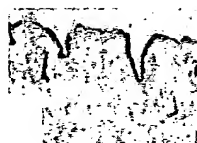


FIG.8E

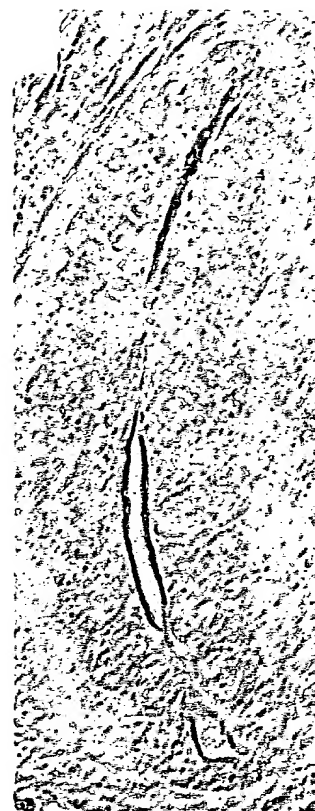


FIG.8B



FIG.8C

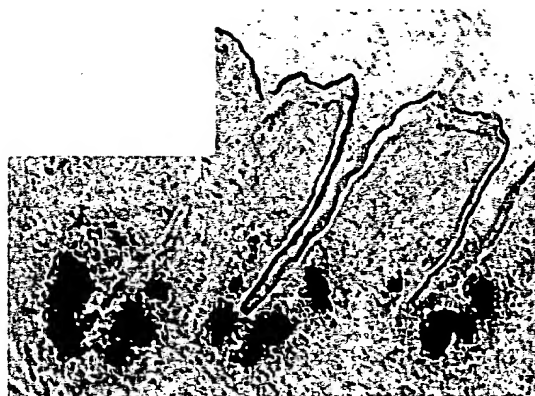


FIG.8D

FOOT COPY 00210000





FIG.9G

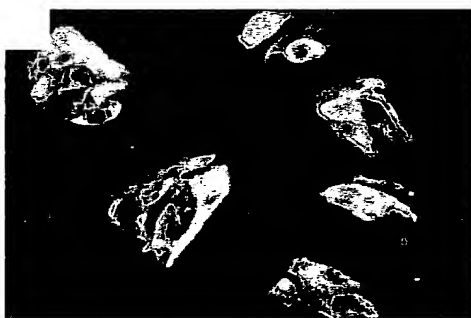


FIG.9H

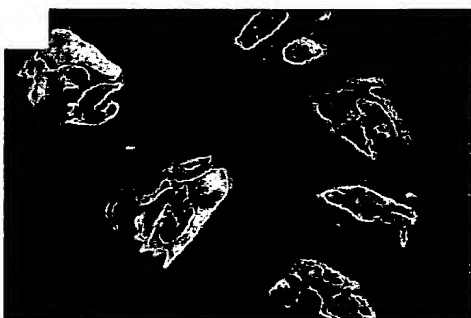


FIG.9I

FIG. 9G, 9H, 9I

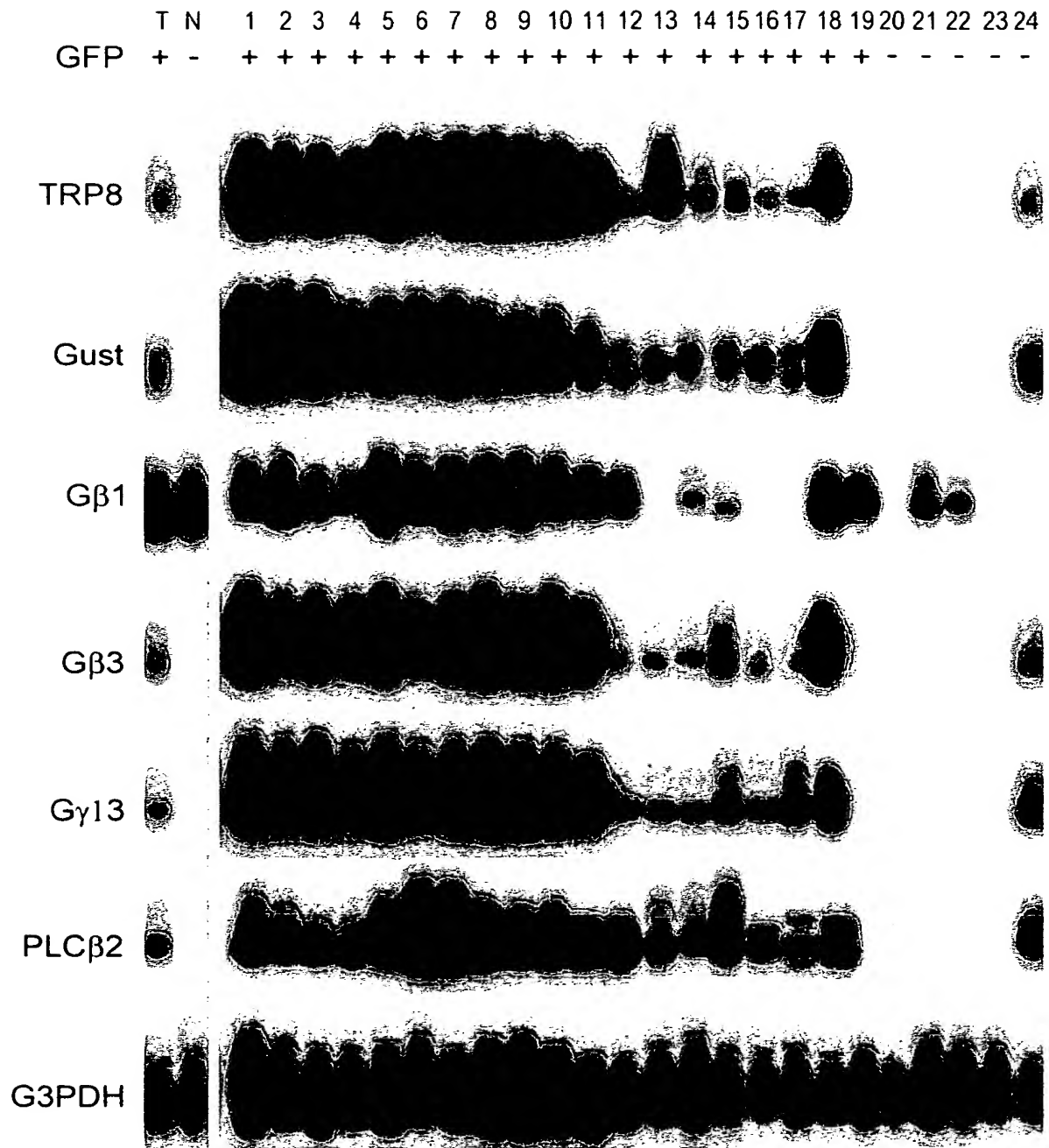


FIG.10

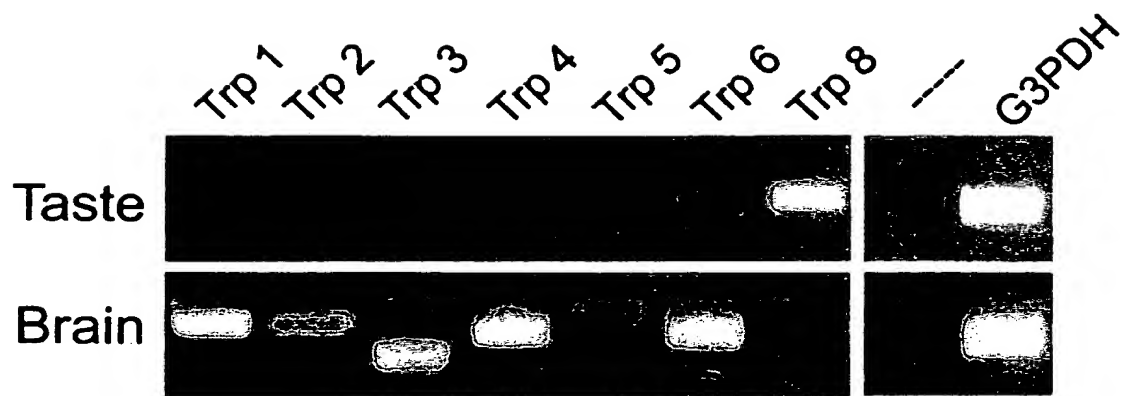


FIG. 11

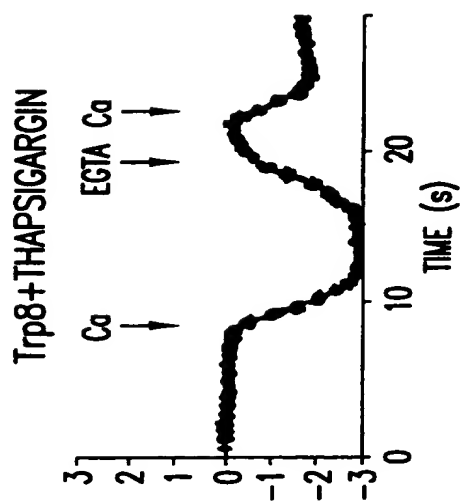


FIG. 12A

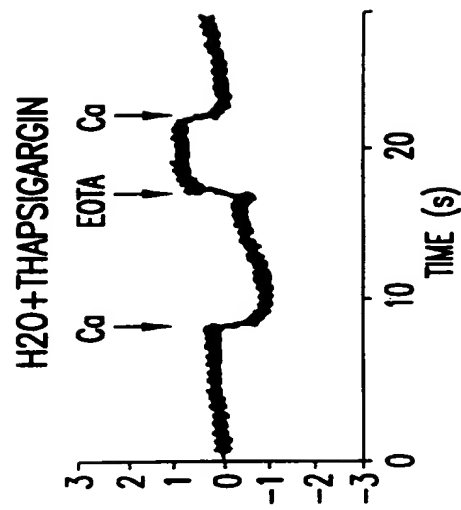


FIG. 12C

I-V RELATIONSHIP IN Trp8 INJECTED OOCYTES

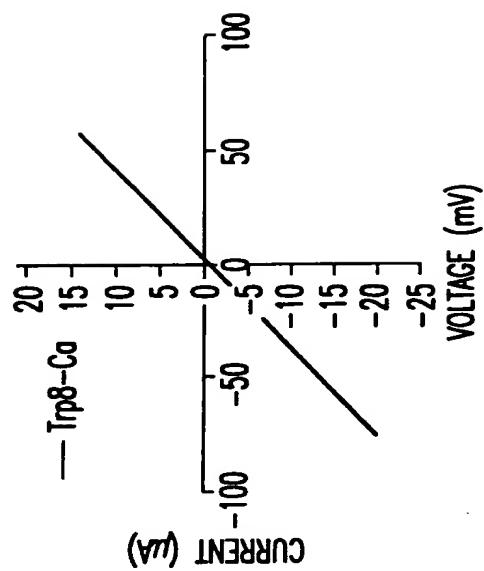


FIG. 12B

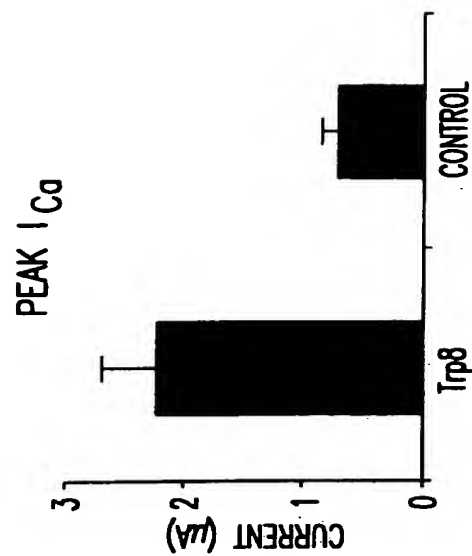
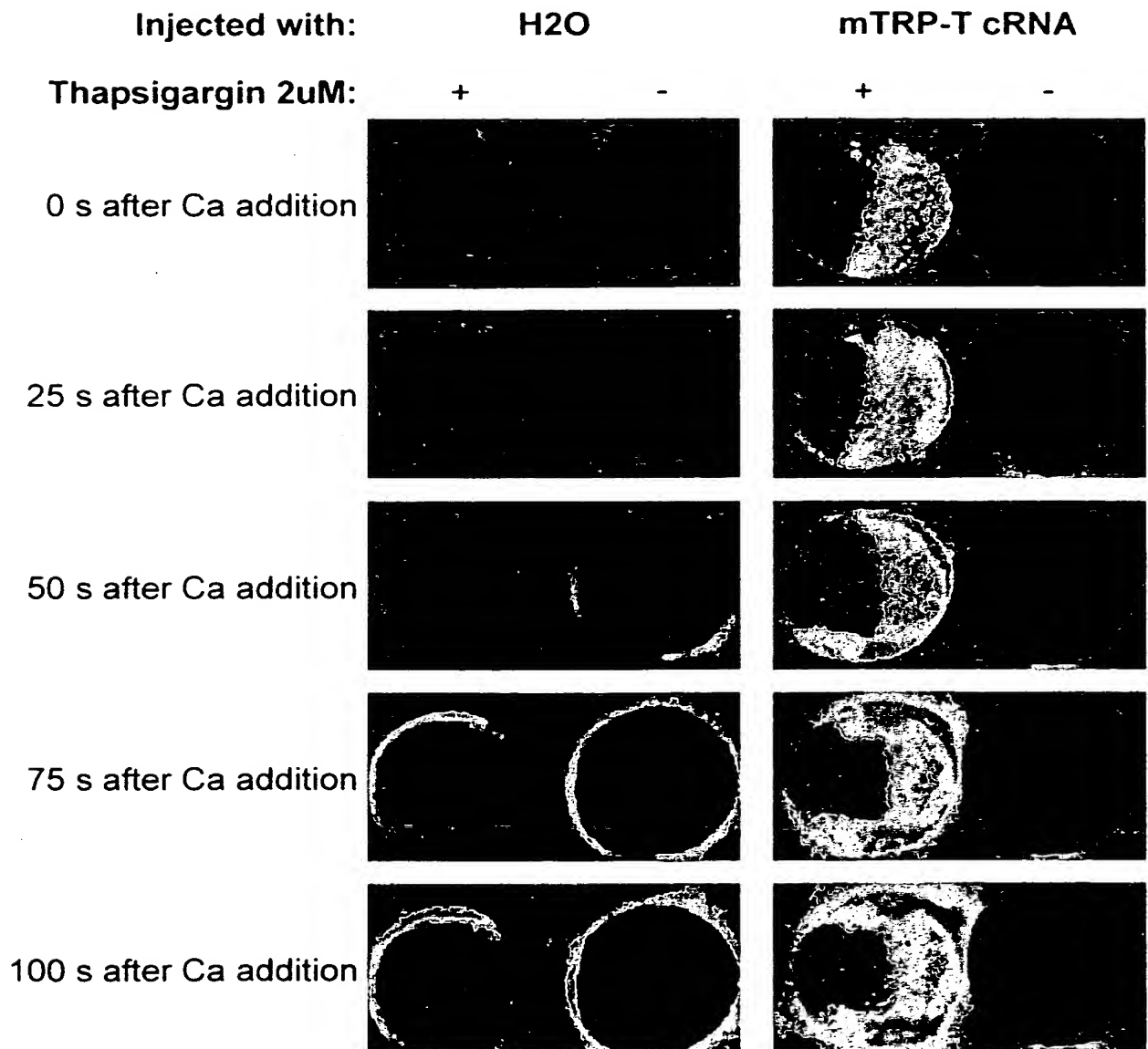


FIG. 12D



TRANSDUCTION OF TASTE STIMULI

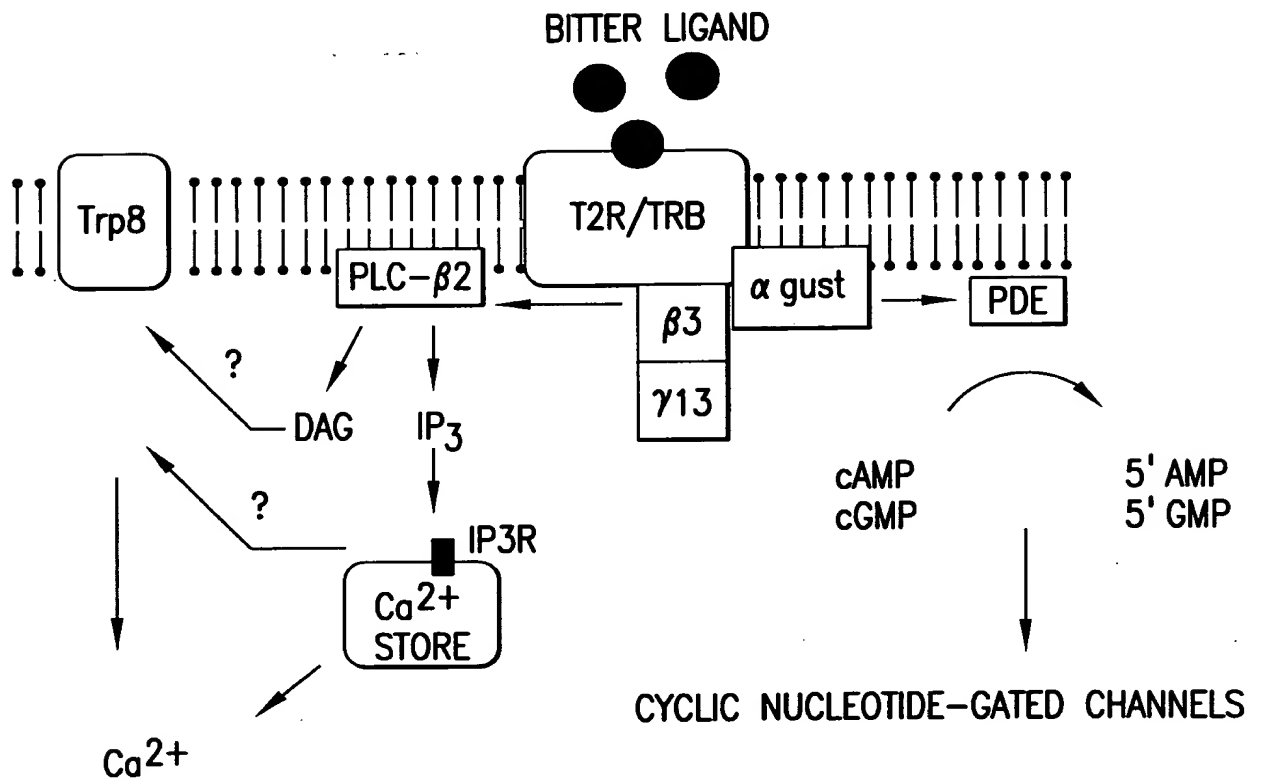


FIG. 14